applying a shear force corresponding to a shear rate of 10,000 s^{-1} or more to a mixture of component (A), component (B) and component (C).--

REMARKS

Claims 1-20 are pending. Claims 1 and 20 have been amended as discussed in the interview to recite "more than 10" to distinguish it from the prior art compositions which contain up to 10 parts oily phase. Support for this change is found in original Claim 1 and at the bottom of page 3 of the specification. Claims 2, 6 and 7 have been amended as suggested by the Examiner. Claim 3, as amended, finds support at page 12, lines 7-10, of the specification and in original Claim 3. Claims 15 and 20 contain minor editorial revisions. Accordingly, the Applicants submit that no new matter has been introduced. Favorable consideration of this amendment is requested.

Rejection - 35 U.S.C. § 112, Second Paragraph

Claims 1-20 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. The Applicants submit that these rejections are moot in view of the editorial changes made to the claim language.

Claim Objections

The Applicants submit that the objection to Claim 7 is moot in view of the editorial changes to this claim.

Rejection - 35 U.S.C. § 103

Claims 1-4 and 6-20 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Yu, English translation of JP 63-126542, or alternatively, in view of Cook, U.S. Patent No. 4,908,154. Applicants submit that this rejection may be withdrawn in view of the amendment of independent Claims 1 and 20 to recite "more than 10" parts of oily component to 1 part of hydrophilic surface active agent. Yu does not suggest or provide a reasonable expectation of success in obtaining suitable microemulsions comprising more than 10 parts oily phase per 1 part hydrophilic surface active agent and only describes Yu emulsions containing "up to 10" parts oily phase to 1 part of hydrophilic surface active agent, see page 4, lines 12-13. As Yu explicitly recites an upper limit on the amount of oily component and describes the extreme difficulty in obtaining stable emulsions in the prior art (see e.g. pages 2-3), the Applicants submit that Yu actually teaches away from the present invention.

Additionally, there is no suggestion in Yu for selecting a sheer rate of 10,000 s^{-1} or more, as oppose to some other sheer rate, to produce an oil-in-water emulsion.

With respect to Claim 2, Yu does not suggest that oil-in-water emulsions having more than 10 parts oily phase to one part hydrophilic surface active agent would have a transparency at 550 nm of 50% or more.

but would it be inherent?

With respect to Claim 10, Yu indicates that the surfactants must be ionic, see page 4, lines 17-19 and thus does not contemplate the subject matter of Claim 10 which is directed to nonionic surfactants having HLB values of 9 or more, see page 6 of the specification for a definition of HLB.

Cook teaches a method of forming a microemulsion, but does not suggest or provide a reasonable expectation of success in obtaining suitable microemulsions comprising more than 10 parts oily phase per 1 part hydrophilic surface active agent.

Ansel which is cited on page 4 of the Official Action is directed to emulsions. Page 244, col. 2, mentions agents having an HLB value of 8 to 18. However, it does not suggest or provide a reasonable expectation of success in obtaining suitable microemulsions comprising more than 10 parts oily phase per 1 part hydrophilic surface active agent.

Accordingly, as the cited prior art does not suggest or provide a reasonable expectation of success for oil-in-water emulsions containing more than 10 parts oily phase to 1 part hydrophilic surface active agent, and teaches away from the invention by indicating the difficulty in obtaining suitable emulsions, the Applicants respectfully submit that this rejection may now be withdrawn.

Rejection - 35 U.S.C. § 103

Claim 5 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Yu as applied to Claims 1-4 and 6-20, and further in view of Drapier et al, U.S. Patent No. 6,121,228. The prior art cited above, does not anticipate or suggest the present invention, because it does not suggest using a ratio of more than 10 parts of oily component to a hydrophilic surface active agent. Moreover, Yu point out the extreme difficulty in obtaining stable emulsions.

Drapier et al. is directed to liquid cleaning compositions. Such compositions comprise 1.0 wt% to 8 wt.% insoluble hydrocarbons, col. 9, lines 40-44, but and 2% or more anionic surfactants, col. 5, lines 43-44 and Claim 1, part (a). While Drapier is cited as teaching water-in-oil microemulsions have particular viscosities, see e.g. col. 14, line 23, these teachings are not pertinent to the emulsions of the present invention, because they comprise less than 10 parts of oily substance to surfactant. There is no suggestion at all for

producing an oil-in-water emulsion by using a ratio of more than 10 parts oily component to 1 part surface active agent.

Accordingly, as the cited prior art does not teach or suggests the claimed ratio of more than 10 parts oily phase to 1 part hydrophilic surface active agent, the Applicants respectfully submit that this rejection now be withdrawn.

Conclusion

In view of the above amendments and remarks, the Applicants respectfully submit that Claims 1-20 are now in condition for allowance. Early notification to that effect is earnestly solicited.

Respectfully submitted,

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Marked-Up Copy
Serial No: 09/842,161
Amendment Filed on:
Herewith

IN THE CLAIMS

--1. (Twice Amended) An oil-in-water emulsion comprising:

(A) a hydrophilic surface active agent,

(B) an oily component and

(C) water,

wherein the weight ratio of component (B) is more than 10 or more based on 1 of the component (A), and

wherein said emulsion is obtainable by applying a shear force corresponding to a shear rate of 10,000 s^{-1} or more to a mixture of component (A), component (B) and component (C).

2. (Twice Amended) The oil-in-water emulsion according to Claim 1 [that has] having a light transmittance at 550 nm of 50% or more.

3. (Twice Amended) The oil-in-water emulsion according to Claim 1[, wherein the] having emulsion particles with an average particle size [of the particles in the emulsion ranges] ranging from 0.01 to 0.2 μm.--

6. (Twice Amended) The oil-in-water [type] emulsion cosmetic according to Claim 1, wherein said emulsion is obtainable by applying a shear force corresponding to a shear rate

of 1,000,000 s^{-1} or more to a mixture of the component (A), component (B) and component (C).

7. (Twice Amended) The oil-in-water emulsion according to Claim 2, wherein said emulsion is obtainable by applying a shear force corresponding to a shear rate of 1,000,000 s^{-1} or more to a mixture of the component (A), component (B) and component (C)[].

15. (Amended) The oil-in-water emulsion of Claim 1 that is produced using a high-pressure commercial emulsifier that applies a shear force corresponding to a shear rate of 10,000 s^{-1} or more.

20. (Amended) A method of making an oil-in-water emulsion comprising:

(A) a hydrophilic surface active agent,

(B) an oily component and

(C) water,

wherein the weight ratio of component (B) is more than 10 [or more] based on 1 of the component (A) comprising:

applying a shear force corresponding to a shear rate of 10,000 s^{-1} or more to a mixture of component (A), component (B) and component (C) [for a time and under conditions suitable from forming an oil-in-water emulsion].--